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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/539,872	03/31/2000	Ravin Balakrishnan	1252.1047	9242

21171 7590 06/18/2003

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EXAMINER

WALLACE, SCOTT A

ART UNIT	PAPER NUMBER
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2671

DATE MAILED: 06/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/539,872

Applicant(s)

BALAKRISHNAN ET AL.

Examiner

Scott Wallace

Art Unit

2671

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16-20, 22-27, 35 and 36 is/are allowed.
- 6) ☒ Claim(s) 1-3 and 37-39 is/are rejected.
- 7) ☒ Claim(s) 4-15, 21 and 28-34 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

37 CFR sec 1.48 to add Karan Singh is deemed appropriate by Mark Zimmerman (SPE).

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 37-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Surface Deformation Using the Sensor Glove.
3. As per claim 1, Surface Deformation Using the Sensor Glove discloses a curve production system, comprising: a flexible device having relative position sensing elements, and producing relative positions relative to a reference position sensing element (pg 189 and 191 and fig 1). However, Surface Deformation Using the Sensor Glove does not use a flexible tape, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a flexible tape because the idea of creating curves by using flexible material like a tape or glove means it could be anything that is flexible that looks like a curve.
4. As per claim 2, Surface Deformation Using the Sensor Glove discloses wherein tape shape is dynamically adjustable and curve shape corresponds to the tape shape (pg 189 and 191 and fig.1).
5. As per claim 3, Surface Deformation Using the Sensor Glove discloses wherein the curve is part of a surface and a shape of the surface corresponds to the curve shape (pg 189 and 191 and fig 1).

6. As per claim 37, Surface Deformation Using the Sensor Glove discloses adjusting a shape of a flexible tape; and producing a virtual curve using the flexible tape as control points of a non-uniform rational B-spline curve (pg 189 and 191 and fig 1).
7. As per claim 38, Surface Deformation Using the Sensor Glove discloses a computer readable storage controlling a computer and comprising a process of inputting a shape of a flexible tape and controlling a non-uniform rational B-spline curve responsive to the shape (pg 189 and 191 and fig 1).
8. As per claim 39, Surface Deformation Using the Sensor Glove discloses a graphical user interface comprising a virtual nonuniform rational B-spline tape curve manipulable in a scene responsive to a physical flexible tape (pg 189 and 191 and fig 1).

Allowable Subject Matter

9. Claims 16-20, 22-27, 35, 36 are allowed.
10. The prior art of reference fails to disclose an animation system using the relative positions as a command and an editing system editing one curves and surfaces responsive to the relative position and producing a shape of a surface when the tape curve drags out a surface shape from an anchor curve responsive to movement of the flexible tape and a flexible tape producing twist and six degrees of freedom position information.
11. Claims 4-15, 21, 28-34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Scott Wallace** whose telephone number is **703-605-5163**.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,
Mark Zimmerman, can be reached at 703-305-9798.

Any response to this action should be mailed to:

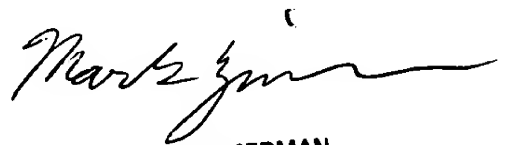
Commissioner of Patents and Trademarks
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or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA,
Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be
directed to the Technology Center 2600 Customer Service Office whose telephone number is
(703) 306-0377.


MARK ZIMMERMAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600